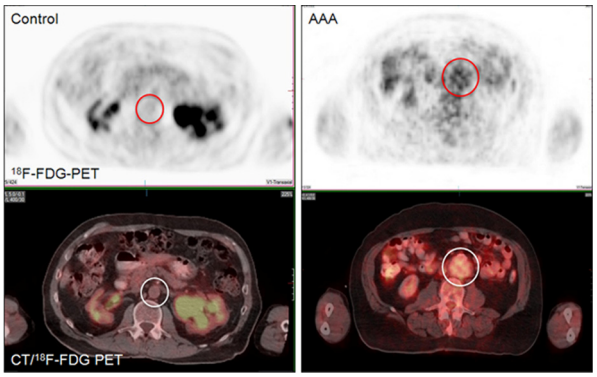

Fig. Representative late phase images from ^{18}F-FDG PET studies for a control and an AAA patient. The aorta is identified on the ^{18}F-FDG PET (red circle) and the CT (gray-scale)/18F-FDG PET (hot-meal) overlay (White circle) images.

Isolated Limb Infusion For Melanoma and Sarcoma Performed in the Endovascular Operating Room

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Objectives: Isolated limb infusion (ILI) is a minimally invasive technique of delivering regional chemotherapy in patients with locally advanced extremity melanoma or sarcoma who may otherwise require aggressive surgical resections or amputation. Prior reports generally describe catheter placement in the angiography suite and subsequent perfusion in the operating room (OR). We aim to demonstrate the feasibility and safety of combined angiography, catheterization and limb infusion in the endovascular OR conducted cooperatively by vascular and oncologic surgeons.

Methods: Under general anesthesia, straight infusion catheters (6F, 100 cm) were positioned with angiographic guidance in both artery and vein of the target extremity. Bolus heparin was administered, the limb was subjected to hyperthermia with a warming blanket, and a proximal tourniquet was inflated. Chemotherapy was infused through a blood warmer into the isolated limb and circulated for approximately 20 minutes (Fig).

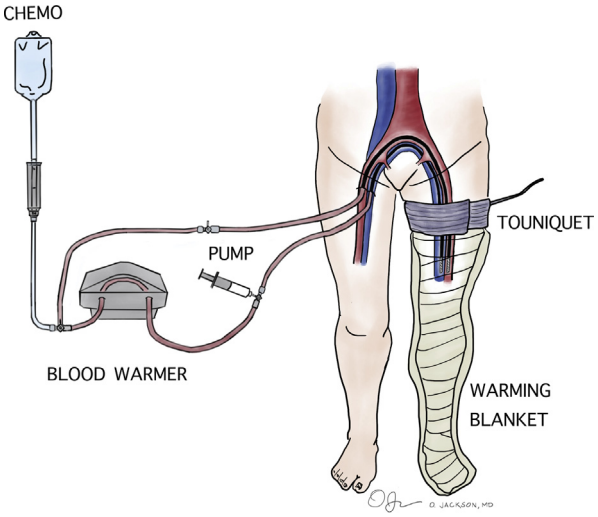

Fig.

Results: Eight patients underwent ILI. Seven legs (n = 5 right and n = 2 left) and one right arm were treated for locally advanced melanoma. All procedures were technically successful, and there were no complications (including no compartment syndrome).

Conclusions: ILI, including catheter insertion and chemotherapy perfusion, can be safely performed in the endovascular OR. This approach minimizes the duration of catheter dwell, eliminates patient transport with catheters in place, and allows trouble-shooting of the circuit during the procedure. This approach requires vascular surgical support representing a novel area of clinical interest for our specialty.

Peripheral Occlusive Disease Provides the Highest Hospital Margins Despite Rising Costs

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Objectives: To review vascular surgical financial trends in a tertiary care setting and evaluate the impact of a vascular program within a healthcare system in the face of lower reimbursements and rising costs.

Methods: Using current procedure terminology (CPT), vascular categories of aortic, cerebrovascular (CV), and peripheral occlusive disease (POCD) were identified at academic tertiary healthcare center. Hospital margins were calculated for each of the defined categories using Health Quest cost accounting data cross-walked with CPT, date of service, and admitting physician for each year from 2010 through 2012.

Results: All categories realized volume growth (VG) and a positive margin for the hospital (Table). Comparing 2010 and 2012, aortic showed an overall VG of 19%, revenue increase of 31%, cost increase of 54% but an overall margin decrease of 7%. CV showed a 30% increase in VG, revenue increase of 13%, cost increase of 5% with a margin increase of 18%. POCD showed overall VG of 35%, revenue increase of 37%, cost increase of 54% and a margin increase of 15%. POCD exceeded both aortic and CV margins combined, by 77%.

Conclusions: When evaluating a vascular program's fiscal viability, volume driven POCD was the only category producing growing hospital margins in the face of significant cost increases.

Table. Volume, revenue, cost, and margin by category studied 2010-2012

		2010	*2011*	*2012*
Aortic	Volume	77	87	92
	Revenue	$2,291,747	$2,475,673	$3,010,392
	Cost	$1,439,146	$1,934,407	$2,220,938
	Margin	$852,601	$541,266	$789,454
Cerebrovascular	Volume	66	84	86
	Revenue	$753,502	$849,555	$849,143
	Cost	$325,721	$352,671	$342,933
	Margin	$427,781	$496,883	$506,210
Peripheral occlusive disease	Volume	298	371	402
	Revenue	$4,433,904	$4,967,958	$6,062,359
	Cost	$2,446,890	$3,364,684	$3,768,819
	Margin	$1,986,014	$1,603,274	$2,293,540

Does Peak Ankle Velocity (PAV) Accurately Reflect Lower Extremity Arterial Perfusion as Assessed by ABI?

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Objectives: Color flow duplex assessment of the entire infrainguinal arterial tree has become routine practice. Despite the vast bank of peak ankle velocities (PAVs) obtained from duplex examinations, the relationship between PAVs and lower extremity arterial perfusion has not been fully assessed. Since ankle-brachial index (ABI) has documented limitations, particularly among diabetic patients, we hypothesized that PAV may correlate with ABI and may therefore provide an additional useful parameter to assess lower extremity arterial perfusion.

Methods: Between January 2010 and January 2013, consecutive outpatients in our hospital's peripheral vascular laboratory that underwent simultaneous lower extremity arterial duplex and ABI assessment were identified. Patient demographics were extracted from the health system's electronic health record. Analysis was performed to assess the relationship between PAV (defined as the highest systolic velocity obtained at either the ankle anterior tibial or posterior tibial artery) and the simultaneously obtained ABI.